

Guess My Pattern

Reporting Category Number and Number Sense

Topic Determining patterns created by counting by twos, fives, and tens on a hundred chart

Materials

- Hundred charts
- Transparent counters
- Sequence Cards (attached)
- Colored pencils
- Guess My Pattern Recording Sheet (attached)

Vocabulary

digit, sequence, skip count

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Tell students that they will be figuring out different skip counting patterns from just a few numbers. Have students use a Think-Pair-Share strategy to think of different skip counting patterns, tell their patterns to a classmate, and then share the patterns with the class.
2. Display a large hundred chart, and distribute transparent counters and copies of a hundred chart. Inform students that you are going to give them a sequence of numbers that form a pattern, and it will be their job to guess the pattern. Each time you call a number, mark the number on the displayed hundred chart, and have students place transparent counters on that number on their own charts. Instruct students to wait until after the first four numbers in the sequence have been called before guessing the pattern.
3. Choose a sequence card, and call out the first three (or four) numbers in the sequence. Ask students to guess the pattern, and call on several volunteers to share what they think the pattern might be. Before revealing the pattern, have students predict what the next two numbers in the sequence will be. Call out the next number (or two numbers) in the sequence, and ask students whether their prediction was correct. If not, have the class make a new prediction. Call out the next few numbers, and check to see whether the new prediction is correct.
4. Repeat the process in step 3 a couple of times with different sequences.
5. Group students into pairs, and give each pair a colored pencil and a copy of the Guess My Pattern Recording Sheet. Have students take turns as the “Caller” and the “Receiver.” The Caller thinks of a skip counting pattern and calls out three (or four) digits in the pattern for the Receiver to shade in on a hundred chart and then guess the pattern. Once the Receiver guesses the pattern, students switch roles and repeat the process.

6. Review and summarize with the class what students did and learned in the activity.

Assessment

- **Questions**
 - Were some skip counting patterns easy to identify? If so, which ones? Why?
 - Were some skip counting patterns difficult to identify? If so, which ones? Why?
 - What digits indicate that a pattern is counting by twos?
 - What digits indicate that a pattern is counting by fives?
 - What digits indicate that a pattern is counting by tens?
- **Journal/Writing Prompts**
 - Billy is thinking of a skip counting pattern: 55, 60, 65, 70. Explain Billy's pattern, and list the next three numbers in his pattern. Do you notice anything special about the numbers in Billy's pattern?
 - Compare skip counting by fives to skip counting by tens, including what these patterns have in common and what makes them different.
 - Compare skip counting by tens to skip counting by twos, including what these patterns have in common and what makes them different.
- **Other**
 - As students are working, observe their strategies and rationales for determining the patterns. Encourage the use of various strategies, and allow time for student discussion and justification. Note who is having difficulty identifying patterns and making accurate predictions, and give help, as needed. Collect recording sheets as an assessment.
 - During the activity, occasionally stop and have students answer the following question: "How well do I understand what I am doing?" Students may respond to the question by showing thumbs up (I get it.), a sideways thumb (I kind of understand.), or a thumbs down (I'm still confused). Give help, as needed.
 - Have students complete the statements, "Today I learned _____. Tomorrow I need _____."

Extensions and Connections (for all students)

- Read a realistic story that has skip counting patterns, and discuss how skip counting can be used in practical, everyday situations.
- Have students create a class book of skip counting patterns.
- Have students do an art project showing skip counting patterns (e.g., flowers with 2 leaves, with 4 leaves, with 6 leaves...; a group of 5 ladybugs, a group of 10 ladybugs, a group of 15 ladybugs...).

Strategies for Differentiation

- Provide large hundred charts to students who have difficulty using the small charts on the recording sheet.
- Provide sequence cards to students who have difficulty creating their own skip counting patterns.

Sequence Cards

45, 50, 55, 60, 65, 70...

Skip count by fives

20, 25, 30, 35, 40, 45...

Skip count by fives

30, 40, 50, 60, 70, 80...

Skip count by tens

100, 90, 80, 70, 60, 50...

Count backward by tens from 100

20, 22, 24, 26, 28, 30...

Skip count by twos

36, 38, 40, 42, 44, 46...

Skip count by twos

52, 54, 56, 58, 60, 62...

Skip count by twos

48, 50, 52, 54, 56, 58...

Skip count by twos

Guess My Pattern Recording Sheet

Directions: The Caller calls out some numbers of a skip counting pattern, and the Receiver shades the called-out numbers in one of the hundred charts below. The Receiver guesses the pattern and writes it under the hundred chart. Players exchange roles and repeat the process.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Pattern: _____

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Pattern: _____

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41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
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Pattern: _____

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31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
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Pattern: _____